

CLAIMS

What is claimed is:

1. A fluid reservoir having a filler opening, wherein the filler opening comprises a receptacle section having a first diameter and a base section having a second diameter smaller than the first diameter, a seal fixedly mounted relative to the base section, the seal defining a cavity therein and having an upper surface, and a plunger longitudinally displaceable within the filler opening from an open position to a closed position, whereby the plunger in the closed position contacts the upper surface of the seal and displaces the seal to sealingly contact the base section of the filler opening.
2. The fluid reservoir of claim 1, wherein the base section includes a tapered portion and the seal sealingly contacts the tapered portion of the base section.
3. The fluid reservoir of claim 2, wherein the seal further includes a tapered surface adapted for mounting substantially parallel to the tapered portion of the base section.
4. The fluid reservoir of claim 3, wherein the seal further comprises at least one radially extending rib for spacing the seal from the base section.
5. The fluid reservoir of claim 3, further comprising a plurality of radially directed ribs for uniformly spacing the tapered surface of the seal from the tapered portion of the base section.
6. The fluid reservoir of claim 5, wherein the plurality of radially directed ribs project outwardly from the tapered surface of the seal.
7. The fluid reservoir of claim 5, wherein the plurality of radially directed ribs project inwardly from the tapered surface of the base section.
8. A capless filler neck assembly for a fluid reservoir, the assembly including:
a filler neck comprising:
an open cylindrical receptacle having a first diameter;

a frusto-conical segment tapering from the first diameter to a second diameter and contiguous with the cylindrical receptacle; and

a tube having a second diameter and adapted to fluidly connect the frusto-conical segment to the fluid reservoir;

a resilient sealing element fixedly mounted within the filler neck and including a frusto-conical surface adapted for placement within the frusto-conical segment of the filler neck and a spherical surface; and

a remotely mounted plunger adapted for insertion into the open cylindrical receptacle, whereby upon insertion into the open cylindrical receptacle, the plunger contacts the spherical surface of the resilient sealing element, causing the resilient sealing element to deflect outwardly and into sealing contact with an inner wall of the filler neck, fluidly isolating the open cylindrical receptacle from the tube.

9. The assembly of claim 8, wherein the plunger is adapted for remotely mounting to an inner surface of an automobile hood.

10. The assembly of claim 8, wherein the resilient sealing element further comprises radially extending ribs for centering the sealing element within the filler neck.

11. A sealing assembly for a fluid conduit including a first section, a second section, and an intermediate section fluidly connecting the first and second sections, the sealing assembly comprising:

a resilient member fixedly positioned within the fluid conduit and including a contact surface and a sealing surface, the resilient member configured to present a passage through the fluid conduit in a resting position and to block the fluid conduit in a sealing position, the sealing surface adapted to deflect toward a wall of the fluid conduit when the contact surface is deflected longitudinally into the fluid conduit; and

an actuation member for insertion into the fluid conduit to an extent to move the resilient member to a sealing position by deflecting the contact surface longitudinally into the fluid conduit to an extent that the sealing surface is deflected outwardly into sealing contact with the wall of the fluid conduit,

wherein upon removal of the actuation member, the resilient member returns to the resting position.

12. The sealing assembly of claim 11, wherein the resilient member is fixedly positioned in the intermediate section

13. The sealing assembly of claim 12, wherein the first section has a first diameter, the second section has a second diameter smaller than the first diameter, and the intermediate section reduces the first diameter to the second diameter.

14. The sealing assembly of claim 13, wherein the intermediate section is tapered from the first diameter to the second diameter.

15. The sealing assembly of claim 14, wherein the intermediate section is frusto-conical in configuration.

16. The sealing assembly of claim 11, wherein the first section has a first diameter, the second section has a second diameter smaller than the first diameter, and the intermediate section reduces the first diameter to the second diameter.

17. The sealing assembly of claim 16, wherein the intermediate section is tapered from the first diameter to the second diameter.

18. The sealing assembly of claim 17, wherein the intermediate section is frusto-conical in configuration.